

DETAILED ACTION

Claim Objections

Claim 63 is missing from the currently listing of claims. The claim has been examined since the Remarks indicate that it is pending.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. **Claims 32-35, 43-49 and 58-60** are rejected under 35 U.S.C. 102(b) as being anticipated by Ikeda et al. 5,795,139.

Ikeda et al. discloses an apparatus comprising: a rotating tool that is monolithic with a shaft and a fluid film bearing system wherein the fluid film bearing system comprises two thrust bearings at both coaxial surfaces of the rotating tool and further comprising two journal bearings positioned at the shaft (col. 8, lines 56-64); designed for balanced high-speed rotation; the rotating tool is a disc; the rotating tool is a rotor; that during rotation better process stability is achieved than with conventional machinery; during rotation better precision and process reliability is achieved than with conventional machinery; the apparatus is driven by an electric motor; the apparatus is driven by a turbine; and the bearings combine both bearing and motor function (col. 10, line 9-col. 11, line 15).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. **Claims 36-42, 50-57 and 61-63** are rejected under 35 U.S.C. 103(a) as being unpatentable over Ikeda et al.

Ikeda et al. is described above. Referring to claims 36 and 37. Ikeda et al. does not specifically disclose the rotating tool being a drum or a cutter. The type of rotating tool is a matter of design choice. The elements that facilitate the functional aspects of the tool are present therefore it would have been obvious to one of ordinary skill in the art to substitute a drum or cutter element as a matter of choice.

Referring to claims 38-42, 56, 57 and 61-63, Ikeda et al. does not specifically disclose the rotating tool containing magnets, an illumination source, a sensor, a high-speed cutting tool or a high-speed imaging tool. The Examiner takes Official Notice that rotating tool containing magnets, an illumination source, a sensor, a high-speed cutting tool or a high-speed imaging tool are notoriously old in the art; and to incorporate such features are a matter of engineering expedient.

Referring to claims 50-55, Ikeda et al. does not specifically disclose rotational speed of the apparatus. Determining the rotational speed is dependent on the intended use of the tool; and these speeds may be obtained through experimentation.

Response to Arguments

5. Applicant's arguments filed 1/4/08 have been fully considered but they are not persuasive.

In response to applicant's arguments that U.S. Patent 5,795,139 (to Ikeda et al.) does not disclose a monolithic tool, the tool constitutes the claimed elements. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have made Ikeda's tool monolithic, since it has been held that forming in one piece

an article which has formerly been formed in two pieces and put together involves only routine skill in the art. *Howard v. Detroit Stove Works*, 150 U.S. 164 (1893).

6. In response to applicant's arguments that compressor of U.S. Patent 4,420,986 (to Nokayama et al.) does not exceed speeds of 6,000 rpm since it is not monolithic, then if the tool is monolithic then it stands to reason it would be capable of functioning at the claimed speeds.

7. In response to applicant's arguments that Ikeda et al. does not utilize the sides of the rotating tool/blade and/or bearing surface, the elements are present in the Ikeda et al. apparatus and to arrange them in the manner as claimed is a matter of engineering expedient.

8. Consideration has been given to WO 2003/103893 A3.

Conclusion

9. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ALVIN J. GRANT whose telephone number is (571)272-4484. The examiner can normally be reached on Mon-Fri 8:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph J. Hail can be reached on (571) 272-4485. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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/Joseph J. Hail, III/

Supervisory Patent Examiner, Art Unit 3723